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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,134	07/25/2001	Clifford Zitlaw	400.122US01	6437
7590	12/27/2004		EXAMINER	
FOGG, SLIFER & POLGLAZE, P.A. P.O. Box 581009 Minneapolis, MN 55458-1009				PADMANABHAN, MANO
		ART UNIT		PAPER NUMBER
		2188		

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/915,134	ZITLAW ET AL.	
	Examiner	Art Unit	
	Christian P. Chace	2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 25 July 2001.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-38 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 July 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/7/02</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Information Disclosure Statement

IDS submitted 7 March 2002 has been considered by examiner. A signed and initialed copy is attached hereto.

Drawings

Figure 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance. See paragraph 39 of the instant specification, which refers to the "older systems such as the system 500 of figure 5."

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "Power-Up Initialization for Synchronous Flash Memory."

The disclosure is objected to because of the following informalities: In paragraph 39, "loading theses" should be --loading these--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 32 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Nowhere in the instant specification is a non-synchronous bus recited.

Claim 32 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. As the non-synchronous bus is not recited, it is not enabled either.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-10, 12-14, 17-20, 22-31, and 33-36 are rejected under 35

U.S.C. 102(b) as being anticipated by applicants' admitted prior art.

With respect to independent claims 1, 8, 17, 22, and 28, a synchronous flash memory device is disclosed in paragraph 7 of the instant specification.

A memory array is disclosed in prior art figure 1, #106.

A control circuit is disclosed in prior art figure 1, #100.

A synchronous memory interface is disclosed in paragraph 7. The synchronous flash memory device beginning initialization upon receiving a power signal (RP#) on a power bus (signals are inherently delivered on a bus) is disclosed in paragraph 28 and in prior art figure 2. Stopping the initialization in response to an external command is inherent in the prior art figure 2 – a computer must be told what to do. Therefore, an “external command” must be issued to stop the initialization.

With respect to claim 4, the synchronous [memory] interface being an SDRAM or a DDR-SDRAM compatible interface is disclosed in figure 2.

With respect to claims 5, 12, 18, and 23, the initialization cycle beginning when the power signal on the bus reaches a predefined “trip point,” is disclosed in figure 2 as “t.sub.0”

With respect to claims 6 and 13, the initialization cycle beginning “a redefined time period” after receiving the power signal on the bus is disclosed in figure 2 as “t.sub.0,” with the predefined time period being zero – it starts immediately.

With respect to claims 7, 14, and 25, the initialization cycle stopping at “a random point” in the initialization cycle when the external command is received is disclosed in figure 2, with the “random point” being when it is complete (t.sub.1).

With respect to claims 9-10 and 26-27, the memory device being a non-volatile memory device (specifically, a flash memory) is disclosed in figure 1, #106.

With respect to claims 19 and 24, beginning the initialization cycle upon receiving the power signal further comprising beginning the initialization cycle upon the power signal reaching a predetermined value is disclosed as discussed supra with respect to claims 6 and 13. The delay period is zero.

With respect to claim 20, the initialization signal stopping upon receiving the command further comprises stopping the initialization signal at an “in-progress point” in the cycle is disclosed as discussed supra with respect to claims 7 and 14.

With respect to claim 29, a separate external data source is disclosed in figure 5, #508.

With respect to claim 30, the separate external data source further comprising a non-volatile memory device is disclosed in figure 5, #508. Note the description in paragraph 39 referring to the system of figure 5 as old.

With respect to claim 31, the separate external data source being coupled to the host controller on a separate bus is also disclosed in figure 5.

With respect to claim 33, the host controller receiving software routines to control the synchronous flash memory deice from a non-volatile data source is disclosed in paragraph 39.

With respect to claim 34, the non-volatile data source being [storing] a BIOS is disclosed in figure 5. Examiner wishes to note herein that BIOS is not a physical memory – it is usually stored on a ROM, but can move to RAM to operate faster upon POST. Accordingly, while examiner knows what applicants mean here, it is strongly suggested that the instant wording be rearranged to be consistent with terminology known in the art.

With respect to claim 35, the host controller stopping the initialization cycle by issuing an external command is disclosed in paragraph 39.

With respect to claim 36, the host controller comprising a processor is disclosed in figure 5, #502.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 37-38 are rejected under 35 U.S.C. 102(e) as being anticipated by Kessler (US Patent #6,820,196 B2).

With respect to independent claims 37 and 38, a computer system is disclosed in the title.

A processor is disclosed in figure 1, #12.

A memory device coupled to the processor is disclosed as the flash in figure 1, #14. The memory device beginning an initialization cycle is disclosed in figure 1, #22 and figure 3. Doing so in response to Vcc is disclosed in figure 1, #10. Terminating the

initialization cycle in response to the processor (examiner assumes applicants mean a command from the processor) is disclosed in figure 3, #22-3 as terminating the timeout.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3, 11, 21, and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicants' admitted prior art in view of SGS-THOMSON ST10F166.

Applicants' admitted prior art discloses all of the claimed limitations as discussed supra with respect to the independent claims and the intervening claims upon which the instant claims depend, not repeated herein in the interest of an efficient Office action.

The difference between applicants' admitted prior art and the instant claims, however, is the explicit recitation that the external command is received through the synchronous interface and is a STOP command.

However, the SGS-THOMSON reference discloses, on page 5 at the bottom of the page, an EINIT instruction being executed in the synchronous flash device. An instruction is a command. The pins are the "synchronous interface" and the EINIT command is an end of initialization command, or "STOP."

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize the STOP command of SGS-THOMSON as the external command of applicants' admitted prior art, because the MCU of SGS-THOMSON MCU

device offers a plurality of benefits, as shown on page 1, that would readily appreciated by one of ordinary skill in the art, such as the Idle and power-down modes, for example, which save power, as made hackneyed in the state of the art.

Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over applicants' admitted prior art.

Applicants' admitted prior discloses the claim limitation so the claims upon which the instant claim depends, as discussed supra.

The difference between the instant claim and applicants' admitted prior art is the explicit recitation that the separate bus is a non-synchronous bus.

However, one of ordinary skill in the art would appreciate the benefits and costs associated with synchronous and non-synchronous (asynchronous or isochronous) busses in a computer system. As this particular bus is disclosed to have a particular purpose or be for any reasons whatsoever non-synchronous, use of same is merely an issue of design choice, and would have been obvious to one of ordinary skill in the art at the time of the invention, given the teachings of applicants' admitted prior art, because, for example, in an asynchronous device, the operations may proceed independent of any timing signal, thereby executing faster than a timed program, as made hackneyed in the state of the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian P. Chace whose telephone number is 571.272.4190. The examiner can normally be reached on MAXI FLEX.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on 571.272.4201. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Christian P. Chace
Examiner
Art Unit 2187